

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**


Claim 1 (Currently Amended): A method for forming a powder molding product by filling a molding portion formed in a mold body with a raw powder and then fitting punches into the molding portion, ~~which is characterized in that~~comprising the steps of:

applying an aqueous solution obtained by dissolving a water soluble lubricant having at least 3g of solubility for 100 g of water at 20°C in water to the molding portion prior to filling the molding portion with a raw powder, and evaporating the aqueous solution to form a crystallized layer on the surface of the molding portion.

Claim 2 (Currently Amended): The method for forming a powder molding product according to claim 1, ~~which is characterized in that~~wherein said lubricant is an oxo-acid based metal salt.

Claim 3 (Currently Amended): The method for forming a powder molding product according to claim 1, ~~which is characterized in that~~wherein said lubricant is phosphate metal salt, sulfate metal salt, borate metal salt, silicate metal salt, tungstate metal salt, organic acid based metal salt, nitrate metal salt or carbonate metal salt.

Claim 4 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is dipotassium hydrogen phosphate, disodium hydrogen phosphate, tripotassium phosphate, trisodium phosphate, potassium polyphosphate, sodium polyphosphate, riboflavin potassium phosphate and riboflavin sodium phosphate.

{W:\20154\0205315us0\00838983.DOC { }

Claim 5 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is potassium sulfate, sodium sulfate, potassium sulfite, sodium sulfite, potassium thiosulfate, sodium thiosulfate, potassium dodecyl sulfate, sodium dodecyl sulfate, potassium dodecyl benzen sulfate, sodium dodecyl benzene sulfate, Food Blue No.1., Food Yellow No.5., potassium ascorbyl sulfate ester and sodium ascorbyl sulfate ester.

Claim 6 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is potassium tetraborate or sodium tetraborate.

Claim 7 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is potassium silicate or sodium silicate.

Claim 8 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is potassium tungstate or sodium tungstate.

Claim 9 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is potassium acetate, sodium acetate, potassium benzoate, sodium benzoate, dipotassium terephthalate, disodium terephthalate, potassium ascorbate, or sodium ascorbate.

Claim 10 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is potassium nitrate or sodium nitrate.

{W:\20154\0205315us0\00838983.DOC 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 }

Claim 11 (Currently Amended): The method for forming a powder molding product according to claim 3, ~~which is characterized in that~~wherein said lubricant is potassium carbonate, sodium carbonate, potassium hydrogen carbonate or sodium hydrogen carbonate.

Claim 12 (Currently Amended): The method for forming a powder molding product according to claim 1, ~~which is characterized in that~~wherein said lubricant uses at least ~~one or two~~ lubricants ~~described in claims 2 to 11~~.

Claim 13 (Currently Amended): The method for forming a powder molding product according to ~~claims~~claim 2 to 12, which is characterized in that wherein said aqueous solution is the one in which said water soluble lubricant is completely dissolved in water to have a concentration greater than or equal to 0.01 % by weight concentration but less saturated concentration.

Claim 14 (Currently Amended): The method for forming a powder molding product according to claim 13, ~~which is characterized in that~~wherein the lubricant is potassium salt or sodium salt.

Claim 15 (Currently Amended): The method for forming a powder molding product according to ~~any one of claims~~claim 2 to 14, ~~which is characterized in~~wherein that an antiseptic substance is added into said lubricant.

Claim 16 (Currently Amended): The method for forming a powder molding product according to ~~any one of claims~~claim 2 to 15, which is characterized in that further comprising the step of adding a defoaming agent is added into the lubricant.

Claim 17 (Currently Amended): The method for forming a powder molding product according to ~~any one of claims~~claim 2 to 16, which is characterized in thatfurther comprising the step of adding a water soluble solvent is added into the lubricant.

{W:\20154\0205315us0\00838983.DOC {UNCLASSIFIED//FOR OFFICIAL USE ONLY} UNCLASSIFIED//FOR OFFICIAL USE ONLY }

Claim 18 (Currently Amended): The method for forming a powder molding product according to claim 17, ~~which is characterized in that~~wherein said solvent is alcohol or ketone.

Claim 19 (Currently Amended): The method for forming a powder molding product according to ~~any one of claims~~claim 2-18, ~~which is characterized in that~~wherein ~~no~~a halogen element is ~~included in~~excluded from the lubricant.

Claim 20 (Original): A mold apparatus for powder molding, comprising:  
a mold body with a through-hole for forming a side of the powder molding product,  
a lower punch to be fitted into the through-hole from beneath,  
an upper punch to be fitted into the through-hole from above,  
a spray member from which a lubricant aqueous solution is faced into the through-hole,  
a heater provided around a molding portion of the powder molding product, the molding portion being defined by the through-hole and the lower punch which is fitted into the through-hole,  
a temperature control system keeping a temperature of the heater higher than an evaporating temperature of the aqueous solution, and  
an aqueous solution in which water soluble lubricant having at least 3g of solubility for 100 g of water at 20°C is dissolved in water, is provided in said spray member.

Claim 21 (Currently Amended): A mold apparatus for powder molding, comprising:  
a mold body with a through-hole for forming a side of the powder molding product,  
a lower punch to be fitted into the through-hole from beneath,  
an upper punch to be fitted into the through-hole from above,  
a spray member from which a lubricant aqueous solution is faced into the through-hole,  
a heater provided around a molding portion of the powder molding product, the molding portion being defined by the through-hole and the lower punch which is fitted into the through-hole,  
a ~~humidity~~temperature control system keeping a temperature of the heater higher than an evaporating temperature of the aqueous solution, but lower than melting temperature of said lubricant, and,

{W:\20154\0205315us0\00838983.DOC [REDACTED]}

an aqueous solution in which water soluble lubricant having at least 3g of solubility for 100 g of water at 20°C is dissolved in water, is provided in said spray member.

{W:\20154\0205315us0\00838983.DOC 11/28/2006 10:00:00 AM }